



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5

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CHICAGO, IL 60604-3590

FEB 19 2013

REPLY TO THE ATTENTION OF:

E-19J

Cindy K. Bladey
Chief, Rules, Announcements, and Directives Branch
Office of Administration
Mail Stop: TWB-05-B01M
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555-0001

Re: Comments on the Final Environmental Impact Statement for the Combined License for Enrico Fermi Unit 3, Monroe County, Michigan – CEQ No. 20130006

Dear Ms. Bladey:

The U.S. Environmental Protection Agency has reviewed the Final Environmental Impact Statement (EIS) for the construction, operation, and decommissioning of the Enrico Fermi Unit 3 Nuclear Power Plant (Fermi 3) in Monroe, Michigan provided by the U.S. Nuclear Regulatory Commission (NRC) and the U.S. Army Corps of Engineers (USACE). Our comments are provided pursuant to the National Environmental Policy Act (NEPA), the Council on Environmental Quality's NEPA Implementing Regulations (40 CFR 1500-1508), and Section 309 of the Clean Air Act.

On September 18, 2008 Detroit Edison Company (DTE) submitted to the NRC an application for a Combined Operating License (COL) for the Enrico Fermi Unit 3 (Fermi 3) to be located adjacent to the existing Units 1 (Fermi 1) and 2 (Fermi 2) on the Detroit Edison Enrico Fermi Atomic Power Plant site (Fermi site). The site proposed by DTE for Fermi 3 is located in Monroe County, Michigan, approximately 30 miles southwest of Detroit, Michigan, and is seven miles southwest of the United States-Canadian international border. The proposed Fermi 3 Unit and its associated infrastructure would be located adjacent to the existing operating Fermi 2. Fermi 1, also within the confines of the Fermi site, is in the process of being decommissioned.

Proposed actions include:

- 1) NRC issuance of a COL for the construction, operation, and decommissioning of a power reactor at the Fermi site in Monroe County, Michigan, and

- 2) USACE permit decisions pursuant to Section 404 of the Clean Water Act, as amended, and Section 10 of the Rivers and Harbors Appropriation Act of 1899 to perform certain pre-construction activities, as appropriate to the USACE scope of analysis, on the site.

EPA provided comments on the Draft EIS on January 10, 2012. Our concerns focused on potential impacts to aquatic resources, air, and traffic as a result of increased onsite personnel, as well as radiological impacts to onsite construction workers. A brief review and any recommended further action is described in the following paragraphs.

Appendix E of the Final EIS identified EPA as commenter number 0078. Each individual comment has been numerically coded and hyphenated to the commenter number, e.g., comment number 0078-14. EPA is using this coding system in our comments for easier reference back to the EIS.

The following comments have been sufficiently addressed; therefore, EPA has no further comments.

- Process – NEPA: 0078-6 and 0078-38
- Hydrology- Groundwater: 0078-3
- Hydrology – Surface Water: 0078-10 and 0078-30
- Ecology – Terrestrial: 0078-18 and 0078-27
- Socioeconomics: 0078-5, 0078-15, 0078-16, and 0078-35
- Meteorology and Air Quality: 0078-19, 0078-21, and 0078-22
- Health – Nonradiological: 0078-25 and 0078-26
- Health – Radiological: 0078-28
- Uranium Fuel Cycle: 0078-7 and 0078-8
- Editorial: 0047-40

EPA continues to recommend that NRC and DTE consider the mitigation measures identified in the following comments be adopted as part of a comprehensive mitigation strategy.

- Site Layout and Design: 0078-32
- Hydrology – Groundwater: 0078-11
- Ecology – Terrestrial: 0078-9 and 0078-17
- Health – Nonradiological: 0078-20
- Benefit-Cost Balance: 0078-33

We also would like to take this opportunity to reiterate our concerns and recommendations regarding the following comments; the enclosed comments discuss these issues in more detail.

- Process – NEPA: 0078-31 and 0078-36
- Socioeconomics: parts of 0078-12, parts of 0078-14, and 0078-34
- Environmental Justice: 0078-13
- Health – Radiological: 0078-23 and 0078-24
- Transportation: 0078-29

- Geology: 0078-4
- Editorial: 0078-37 and 0078-39

Finally, the NRC's Waste Confidence Decision and rule were vacated by the U.S. Court of Appeals for the D.C. Circuit on June 8, 2012. The Waste Confidence Decision and rule were a generic determination that spent fuel could be stored onsite for 60 years past the expiration date of a facility's license and that no discussion of long-term waste storage is required in a facility's new COL EIS or license renewal EIS. Per interpretation of the Waste Confidence Decision and rule at the time of publication of the Fermi 3 Draft EIS, no discussion of environmental impacts of extended waste storage was included. As the Final EIS indicates, an EIS to support the update of the Waste Confidence Decision and rule is being prepared. No licenses dependent upon this decision and rule will be issued until the EIS analyzing long-term storage has been completed. If the results of that EIS identify information that requires a supplement to the Fermi 3 EIS, NRC will perform the appropriate NEPA review before making a final licensing decision on the Fermi 3 license. EPA will review the waste confidence EIS and any supplemental NEPA documentation as required.

Thank you in advance for your consideration of our recommendations to further reduce environmental impacts associated with the Fermi 3 project. Please send us a copy of the NRC license and USACE Record of Decision when they become available. If you have any questions, please feel free to contact me or Elizabeth Poole of my staff at 312-353-2087 or poole.elizabeth@epa.gov.

Sincerely,



Kenneth A. Westlake
Chief, NEPA Implementation Section
Office of Enforcement and Compliance Assurance

cc: Bruce Olson, Nuclear Regulatory Commission
 Colette Luff, US Army Corps of Engineers
 Burr Fisher, US Fish and Wildlife Service
 Katharine David, Michigan Department of Environmental Quality
 David Williams, Federal Highway Administration
 Kristin Shuster, Michigan Department of Transportation
 Bob Stammer, Jr., Monroe County Road Commission
 Randall Westmoreland, Detroit Edison

Enclosure (1): EPA's Detailed Comments

Detailed Comments on the Final Environmental Impact Statement for the Combined License for Enrico Fermi Unit 3, Monroe, Michigan, NUREG-2105 – CEQ No. 20130006

February, 2013

Unresolved Concerns

Process – NEPA (0078-31 and 0078-36)

- Comment 0078-31 pertains to impacts as a result of the construction and maintenance of the transmission lines and substations. While EPA appreciates the addition of Appendix M as a reference, we reiterate our previous comment that impacts resulting from the construction and maintenance of the new transmission lines and substations should be considered as direct impacts and mitigated for as part of the proposed project. Total impacts are estimated to be over 1000 acres of habitat, including over 93 acres of impacts to forested wetlands.
- Comment 0078-36 pertains to the public outreach strategy pursued by DTE. EPA reiterates our recommendation for DTE to outline a detailed public outreach strategy to inform residents and employees of the risks and impacts associated with the proposed Fermi 3 project. Because the proposed project includes unavoidable impacts, particularly to the adjacent communities, the outreach strategy should address all potential impacts, regardless of their magnitude (SMALL, MODERATE, or LARGE¹) or whether they are a risk or a benefit as a result of the project. For example, EPA recommends public outreach materials include mitigation measures that might reduce impacts, such as diesel emissions reduction techniques during construction. EPA believes that a comprehensive public outreach program is necessary for successful mitigation of impacts. There are specific resource impacts where EPA believes this outreach would be particularly beneficial, including, but not limited to:
 - Construction schedule, including anticipated shift changes (when traffic will be heaviest), refueling schedules (when additional personnel will be onsite), and any traffic-related incidents that might impede movement in, out, and around the surrounding community. See further discussion of traffic-related impacts below.
 - Noise monitoring and compliance with the Frenchtown Charter Township ordinance regarding noise annoyance. Noise monitoring should also address impacts to Fermi 2 employees and third-party contractors during construction of Fermi 3.
 - Air quality monitoring data, including dust suppression and diesel emissions reduction efforts.

¹ NRC categorizes impacts to resources as SMALL, MODERATE, or LARGE.

- Radiological data, including monitoring efforts and results on non-occupational workers, such as construction workers at Fermi 3. See further discussion of radiological monitoring below.
- Dewatering at the construction site and the resultant lowering of groundwater levels in adjacent residential wells. EPA recognizes that this is anticipated to be a lowering of one- to two-feet at only a few wells, depending on the type of dewatering technique employed. Because of changes in precipitation, water use patterns by residents, and projected use by DTE, it is difficult to determine whether a one- to two-foot lowering of wells levels would be a SMALL impact, as NRC has determined. However, we encourage the applicant to provide a map and schedule of dewatering to potentially impacted residents, so they may adequately prepare.
- Emergency information, including information for non-radiological emergency responders to surrounding communities.
- Contact information for complaints and questions.

Socioeconomics (0078-12, 0078-14, & 0078-35) & Environmental Justice (0078-13)

- EPA remains concerned about the methodology used to determine the number of additional onsite personnel during construction and resultant impacts, particularly impacts to traffic. The use of the average number of employees across a multi-year project does not appropriately capture the true intensity of impacts, both negative and positive in nature. Because of this, EPA continues to believe that the severity of some categories of impacts is more intense and additional mitigation measures may be appropriate.

In particular, EPA is concerned about the impacts to traffic, as they not only negatively impact adjacent residents and local air quality, but also spread much further from the Fermi site, including onto Interstate 75. We appreciate the “improvement alternatives” listed in tables 4-12 and 4-13, and recommend that DTE work with the federal, state, and local transportation agencies to discuss appropriate traffic related capital and operational improvements, including funding mechanisms and environmental planning.

Health – Radiological (0078-23 and 0078-24)

- EPA continues to have concerns about the classification of Fermi 3 construction workers as “members of the public.” We recognize that DTE has developed a radiological monitoring program for Fermi 2 workers and other onsite occupational workers. However, because there will be no radiological monitoring program for onsite construction workers, it will be difficult to determine if they are receiving more than the

estimated dose limit of 96 millirem (mrem) per year. Therefore, EPA continues to strongly encourage a radiological monitoring program be set up for the onsite construction workers. In order to simultaneously limit cost and validate estimated levels, EPA recommends that at least a portion of construction workers wear radiation badges and the resultant data be made available to all construction workers.

Transportation (0078-29)

- EPA reiterates our previous comment that impacts as a result of increased use of rail in and around the Fermi site should be addressed. For rail use internal to the site, impacts to worker health, noise, and emissions are the primary concerns. For external use, impacts to traffic, accident mitigation, noise and emissions are the primary concerns.

Geology (0078-4)

- EPA commented on the Draft EIS that a discussion of whether karst was present on the Fermi site should be included in the Final EIS. NRC indicated that karst is discussed in section 2.5.4.1 of the Safety Evaluation Report. EPA reviewed this section, as well as the Section 2.6 of the Environmental Report and Section 2.5 of the Final Safety Analysis Report. This information was not in the Final EIS, nor in the associated documents. Therefore, EPA reiterates our previous comment that karst should be discussed and, if it exists, identify how the proposed project may be influenced by it.

Editorial (0078-37 and 0078-39)

- Comments 0078-37 and 0078-39 pertain to the generic way in which other documents were referenced throughout the Draft EIS. Locating citations in the Final EIS remains very difficult, particularly when citations continue to reference entire documents. EPA reiterates our request that NRC use references to specific document page numbers when referring to additional documents.

Mitigation Commitments

EPA recognizes that NRC is unable to include non-nuclear safety or security-related issues into the license agreement. However, EPA reiterates the following comments, pertaining to several mitigation measures that would further reduce environmental impacts. Implementation of the following mitigation measures by DTE could serve as a model for future plant design and planning efforts.

- ***Site Layout and Design (0078-32) and Benefit-Cost Balance (0078-33)***

Comments 0078-32 and 0078-33 pertain to incorporating sustainable practices, green infrastructure, and beneficial reuse into the proposed project. In Appendix E, "NRC encourages the applicant to evaluate the EPA's recommendations and incorporate green

design in landscaping and facilities to the extent practicable.” EPA reiterates our previous comments and commends NRC for recognizing these efforts as environmentally beneficial. Already planned efforts should be identified in the decision documents. We recommend that DTE consider additional practices, such as:

- Beneficial reuse of material, including concrete, aggregate, or other spoils.
- Permeable or porous pavement in new or reconstructed parking lots, sidewalks, and other potentially impervious surfaces, where suitable.
- Energy efficiency measures, such as state-of-the-art insulated building envelope or Energy Star rated appliances.
- Passive design elements, such as use of ambient lighting.
- Water efficiency measures, such as low-flow plumbing in restrooms, employee break-rooms, and similar facilities.

- ***Hydrology – Groundwater (0078-11)***

Comment 0078-11 pertains to the method in which DTE will dewater at the construction site, resulting in a lowered water table in the surrounding area. Because some adjacent residents use groundwater wells, this would result in a lowering of their well levels between one and two feet, depending on the method of dewatering used. EPA reiterates our comments that the method with the least amount of impacts be pursued, which in this case is the reinforced diaphragm concrete system.

- ***Ecology – Terrestrial (0078-9 and part of 0078-17)***

Comment 0078-9 pertains to wetland mitigation measures. EPA reiterates our recommendations for mitigation measures for doing work near and in wetlands and appreciates incorporation of wetland mitigation measure for onsite impacts into the Final EIS. Measures to avoid or minimize impacts to wetlands should be extended to connected actions, such as pre-construction actions and the construction or maintenance of transmission lines and substations. The following measures should be considered by DTE:

- Perform construction in wetlands during times when the ground is frozen.
- Minimize width of temporary access roads.
- Use easily-removed materials for construction of temporary access roads and staging areas (e.g., swamp/timber mats) in lieu of materials that sink (e.g., stone, rip-rap, wood chips).

- Use swamp/timber mats or other alternative matting to distribute the weight of construction equipment. This will minimize soil rutting and compaction.
- Use construction vehicles and equipment with wider tires or rubberized tracks, or use low-ground-pressure equipment to further minimize impacts during construction access and staging.
- Use long-reach excavators, where appropriate, to avoid driving or staging in wetlands.
- Place mats under construction equipment to contain spills.

Comment 0078-17 pertains to the restoration of the tall grass prairie. EPA reiterates our previous comments regarding: 1) restoration of this area once construction is completed, and 2) compensation for any losses on adjacent or nearby agricultural land proposed for temporary lay-down. We recommend that an active or adaptive management plan for this area be developed to ensure its success after planting. This work should be coordinated with managers of adjacent open space parcels.

- ***Health – Nonradiological (0078-20)***

The National Institute for Occupational Safety and Health (NIOSH) has determined that diesel exhaust is a potential occupational carcinogen, based on a combination of chemical, genotoxicity, and carcinogenicity data. In addition, acute exposure to diesel exhaust has been linked to health problems, such as eye and nose irritation, headaches, nausea, asthma, and other respiratory issues. EPA reiterates our comments regarding diesel emissions and strongly encourages following measures be incorporated into the construction plans and contract agreements for the proposed project. Implementation of these measures will not only reduce environmental impacts, but will also reduce human exposure for both onsite employees and adjacent residents. Many of these measures will reduce project costs, particularly since most contractors have already incorporated these measures into their practices.

- Using ultra low-sulfur diesel fuel (15 parts per million sulfur maximum).
- Retrofitting engines with an exhaust filtration device to capture diesel particulate matter before it enters the construction site.
- Positioning the exhaust pipe so that diesel fumes are directed away from the operator and nearby workers, thereby reducing the fume concentration to which personnel are exposed.
- Using catalytic converters to reduce carbon monoxide, aldehydes, and hydrocarbons in diesel fumes. These devices must be used with low sulfur fuels.

- Ventilating whenever diesel equipment operates indoors. Roof vents, open doors and windows, roof fans, or other mechanical systems help move fresh air through work areas. As buildings under construction are gradually enclosed, remember that fumes from diesel equipment operating indoors can build up to dangerous levels without adequate ventilation.
- Attaching a hose to the tailpipe of diesel vehicles running indoors and exhaust the fumes outside, where they cannot reenter the workplace. Inspect hoses regularly for defects and damage.
- Using enclosed, climate-controlled cabs pressurized and equipped with high efficiency particulate air (HEPA) filters to reduce the operators' exposure to diesel fumes. Pressurization ensures that air moves from inside to outside. HEPA filters ensure that any incoming air is filtered first.
- Regularly maintaining diesel engines, which is essential to keep exhaust emissions low. Follow the manufacturer's recommended maintenance schedule and procedures. Smoke color can signal the need for maintenance. For example, blue/black smoke indicated that an engine requires servicing or tuning.
- Reducing exposure through work practices and training, such as turning off engines when vehicles are stopped for more than a few minutes, training diesel-equipment operators to perform routine inspections, and maintaining filtration devices.
- Purchasing new vehicles that are equipped with the most advance emission control systems available.
- With older vehicles, using electric start aids such as block heaters to warm the engine reduces diesel emissions.
- Using respirators, which are only an interim measure to control exposure to diesel emissions. In most cases, an N95 respirator is adequate. Workers must be trained and fit-tested before they can wear respirators. Depending on work being conducted, and if oil is present, concentrations of particulates present will determine the efficiency and type of mask and respirator. Personnel familiar with the selection, care, and use of respirators must perform the fit test. Respirators must bear a NIOSH approval number. Never use paper masks or surgical masks without NIOSH approval numbers.